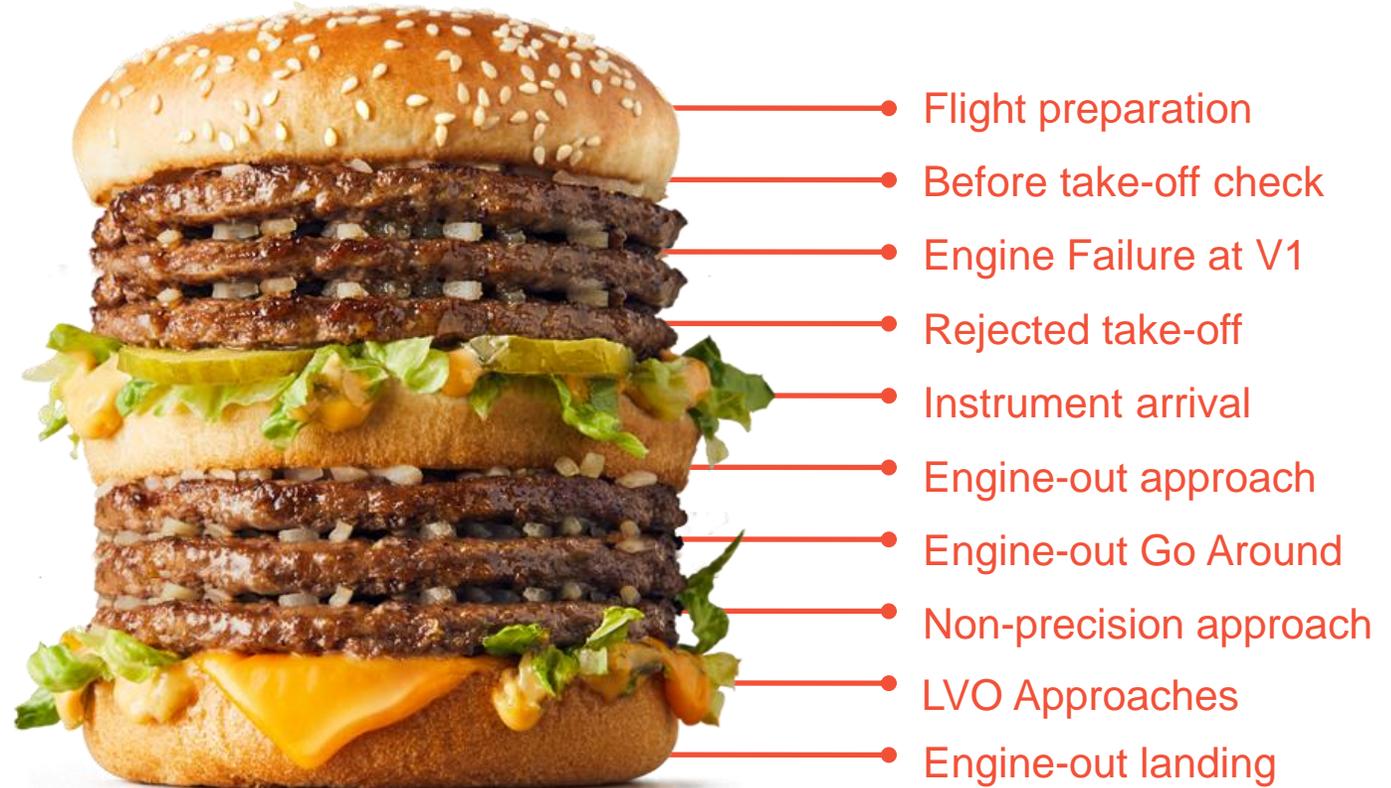


In pursuit of excellence

Evidence-based Training



Yesterday's menu



EBT Program training topics

Gen 3 Jet

A

Adverse weather
Automation
Competencies non-technical
Compliance
Go-around
Manual flying
Mismanaged aircraft
Monitoring & Error Detection
Unstable approach

B

Adverse wind
Aircraft malfunction
Aircraft system management
Approach poor visibility
Landing
Runway taxiway condition
Surprise
Workload pressure

C

ATC
Engine failure
Fire & smoke
Loss of comms
Loading performance
Navigation
Ops or type specific
Pilot incapacitation
Terrain
Traffic
Upset recovery
Windshear recovery

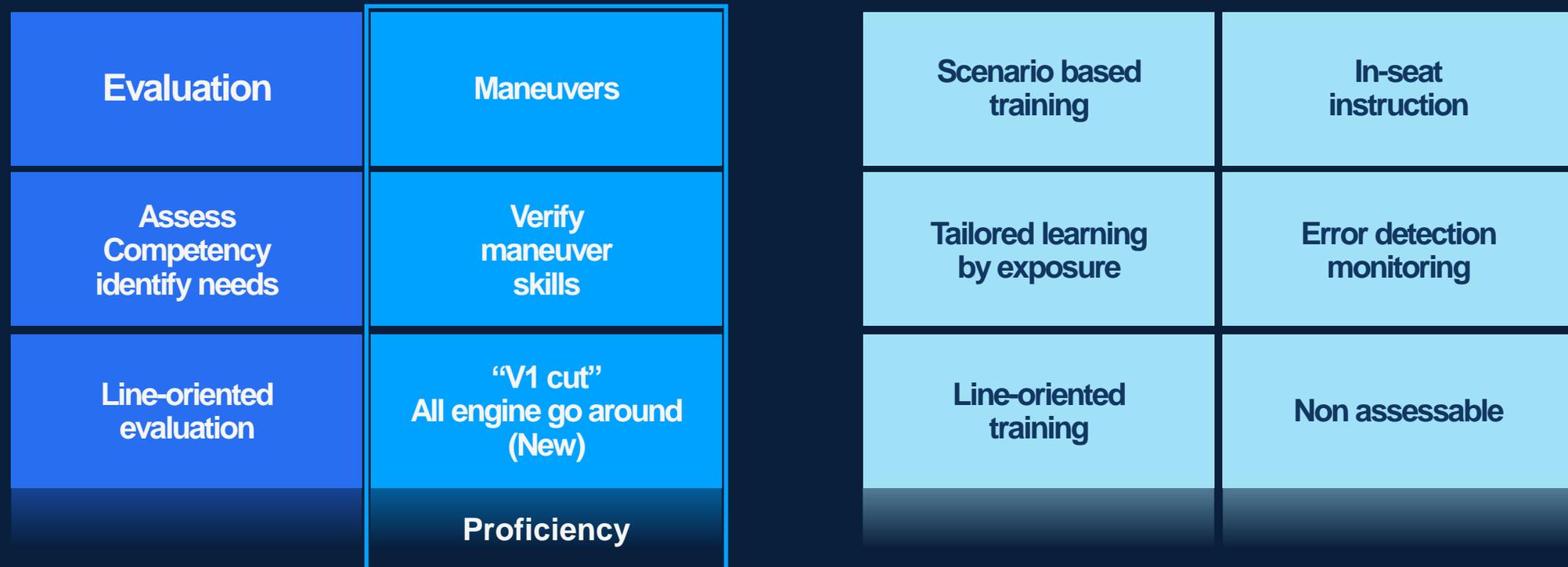
EBT Program

First look
assessment

Day 1

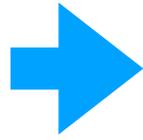
Day 2

Tailored learning



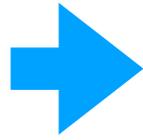
2010

New approach to training?



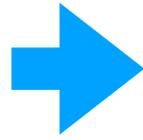
2012

EBT Doc 9995 drafted



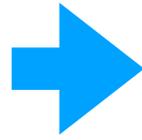
2013

Approach to Authority



February 2014

Process for EBT agreed

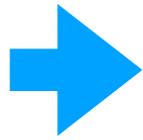


July 2015

Formal application

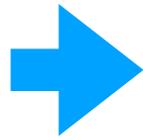
March 2016

EBT implementation seminar



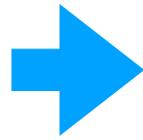
June 2016

Instructor training begins



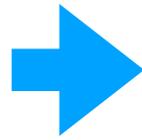
October 2018

Second AAC Authority Workshop



April 2019

Mixed EBT approval

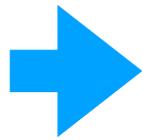


December 2022

Letter of Intent for full EBT

January 2023

5-phases agreed for full EBT



February 2024

Approval

Copa Airlines



CBTA/EBT Principles





Instructor development training



Observations - IRR

#1	CAPT				F10			
APK ✓	1	2	1	2	3	3		
COM -	2	2	1	2	2	4		
FPA	X	X	X	X	3	4		
FPM -	1	2	1	2	3	4		
KNO	X	X	X	X	X	X	X	
LTW X	1	2	3	3	3	4	4	
PSD ✓	1	1	1	2	3	4	3	
SAW ✓	3	2	3	3	3	4	4	3 ✓
WLM ✓	3	2	2	3	3	3	4	3 ✓

#2	CAPT				F10			
APK ✓	2	3	3	3	3	4		
COM ✓	3	3	3	2	3	3		
FPA ✓	3	3	3	3	3	3		
FPM	X	X	X	X	X	X	X	X
KNO ✓	3	2	3	3	3	4	3	
LTW ✓	2	3	2	2	3	4	4	
PSD ✓	3	2	2	2	3	4	3	
SAW ✓	3	3	3	2	3	4	3	
WLM ✓	2	2	2	2	3	4	3	3 ✓

#1	CAPT				F10			
APK ✓	3	4	3	3	4	4	3	3 ✓
COM ✓	3	3	3	3	2	3	3	3 ✓
FPA	X	X	X	X	4	5	5	4 ✓
FPM ✓	3	3	3	3	4	4	5	4 ✓
KNO ✓	4	4	3	3	4	4	3	3 ✓
LTW ✓	3	3	2	3	4	3	3	3 X
PSD ✓	3	3	3	3	4	4	4	3 ✓
SAW ✓	3	3	3	3	3	4	4	3 ✓
WLM ✓	2	3	3	3	4	4	4	3 ✓

Implementation roadmap

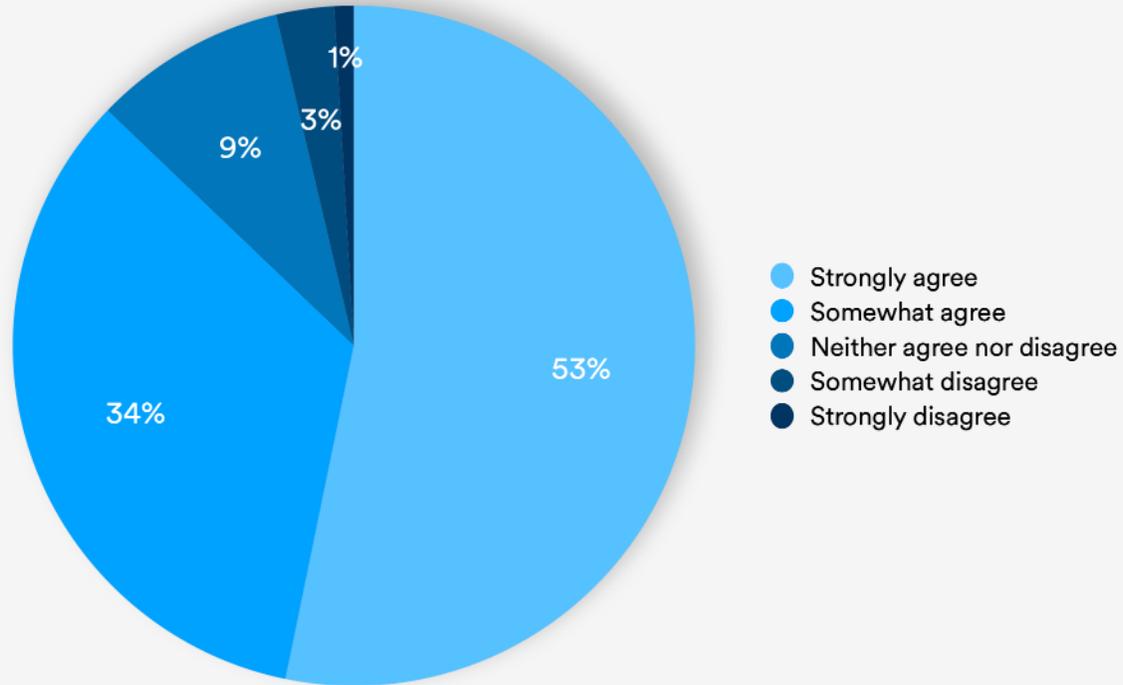




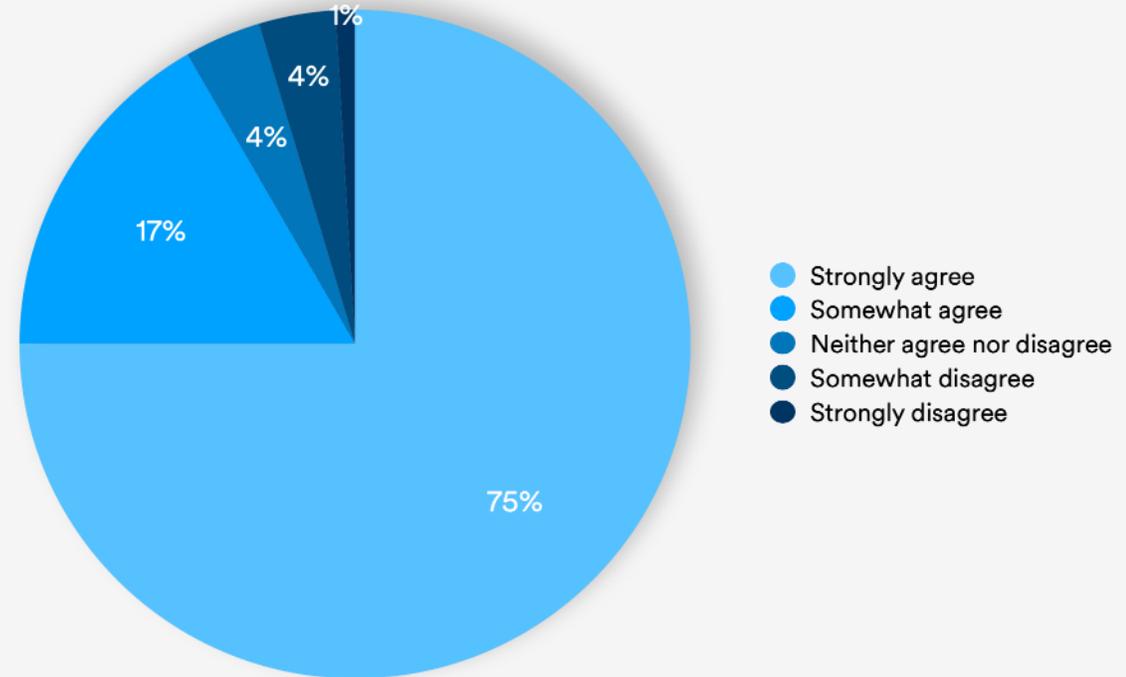
Course developer training

**Competency focused
scenario development**

Feedback

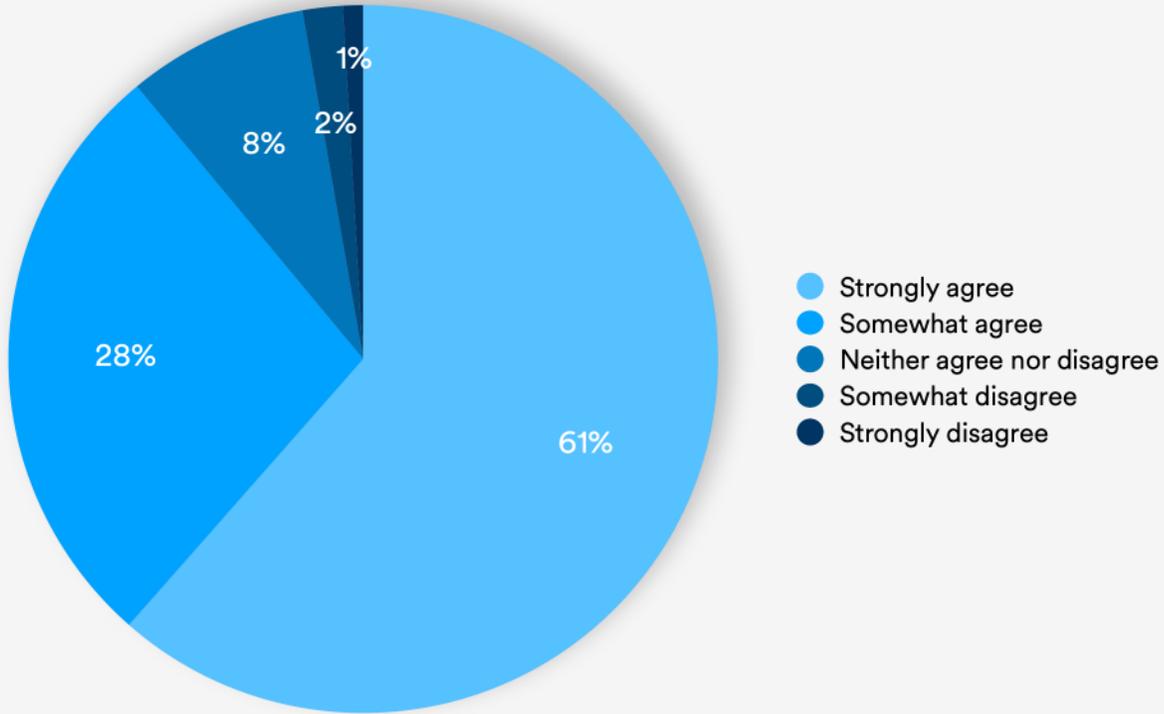


The examiner/instructor accurately identified the **most appropriate area to help me to improve**

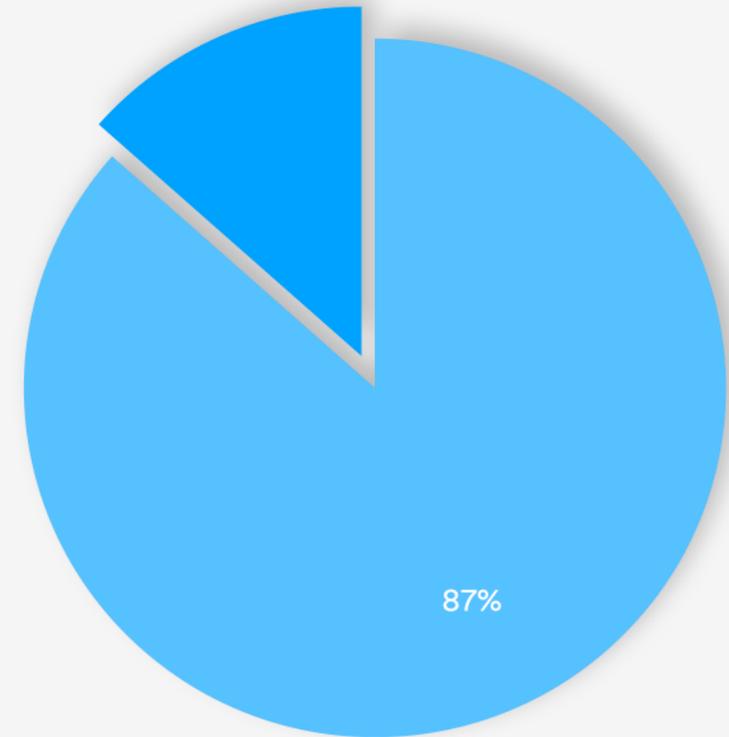


I did not feel judged and the assessments were fair and accurate

Feedback

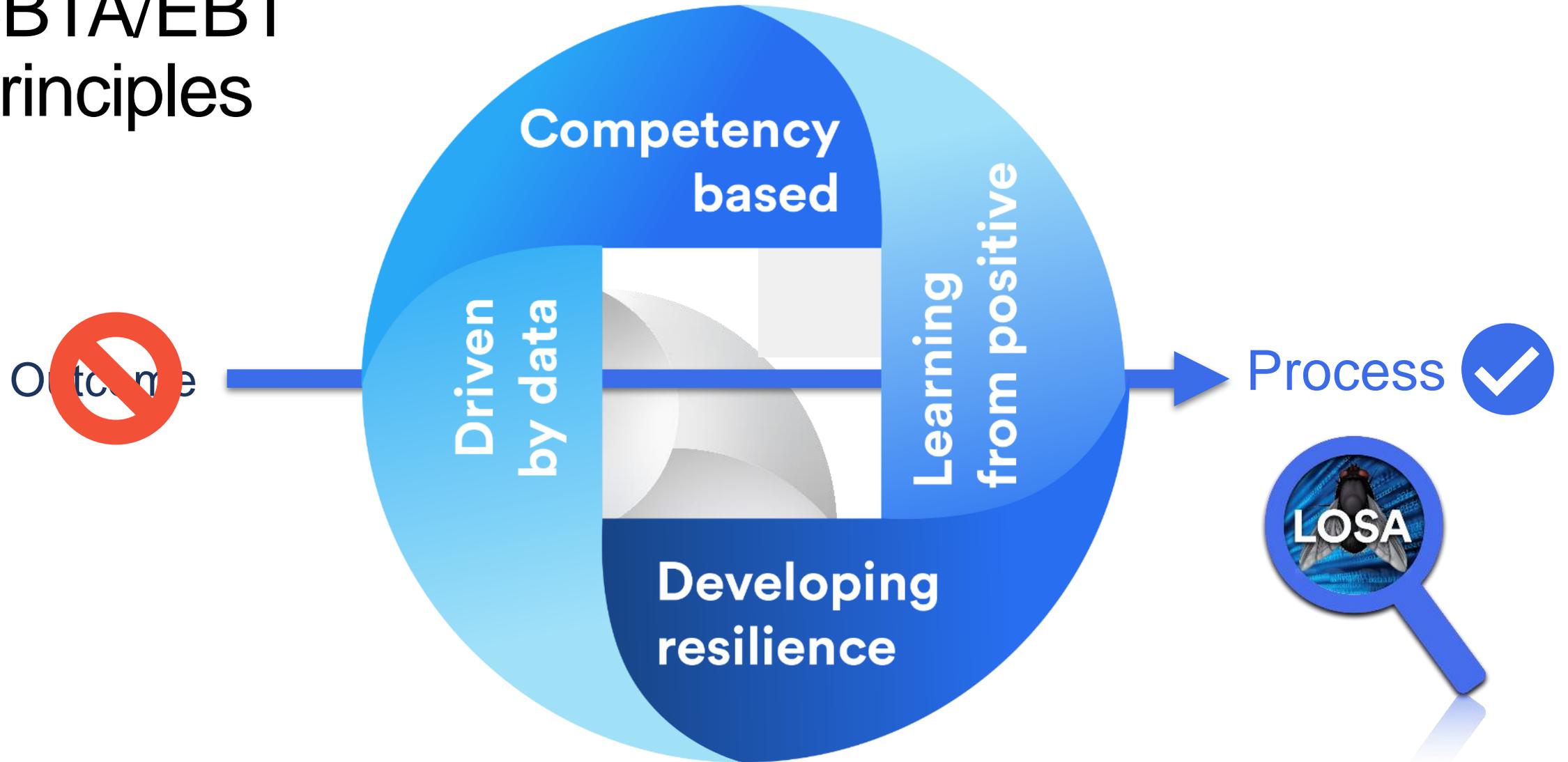


The Instructor/s **facilitated the debrief** and supported me so I could **draw my own conclusions** and identify strategies to improve

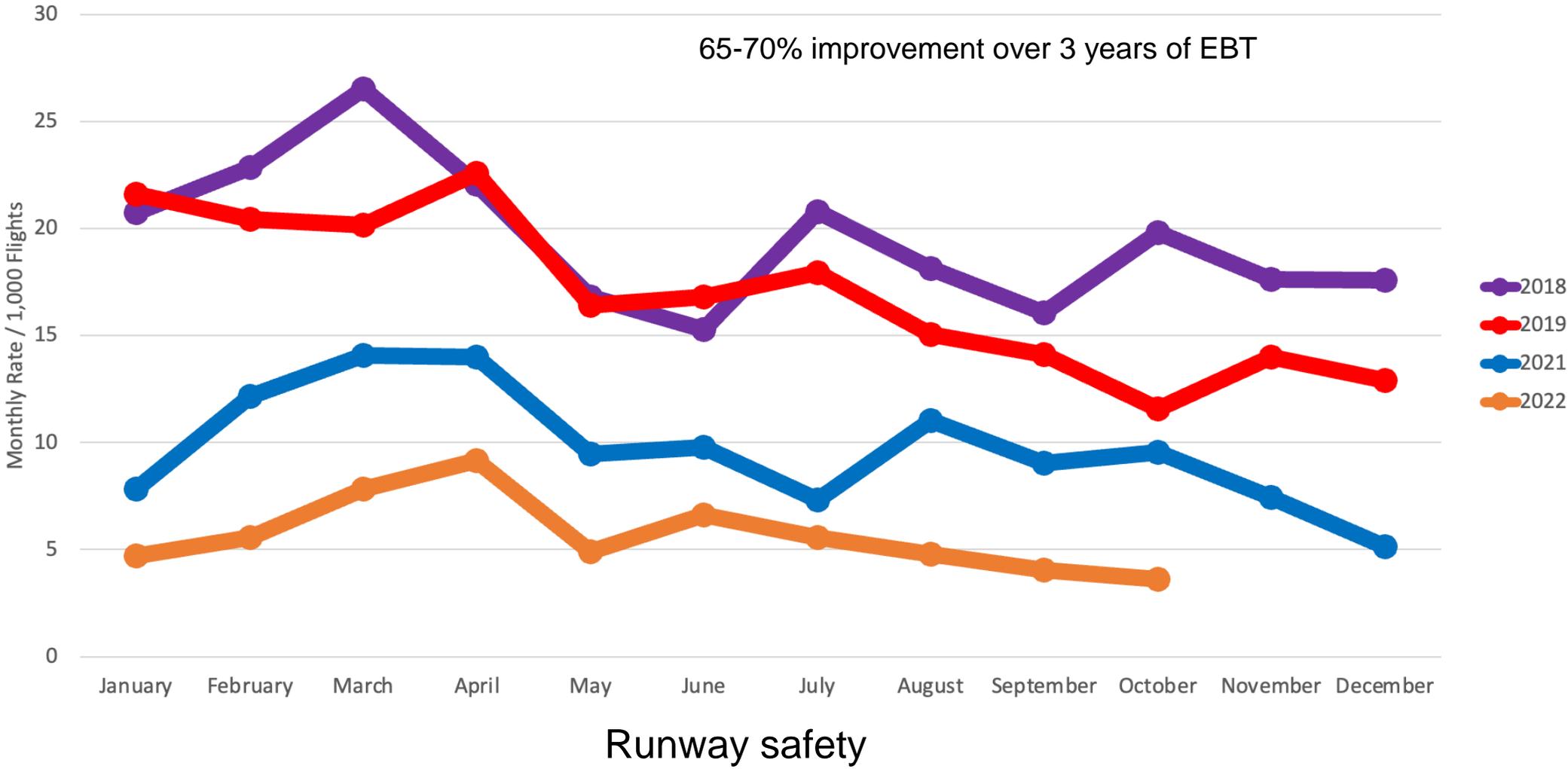


The whole EBT experience will help me to learn and improve confidence. Do you agree?

CBTA/EBT Principles



Results - safety data



EBT worldwide





ACKNOWLEDGEMENTS

This report would not have been possible without the support of many disciplines both within and outside the aviation community. Their contributions are greatly appreciated and endorsed in the results of this report.

John Scully – Author

Michael Varney	Pilot/Instructor	Project Leader - EBT, authoring and editing of the consistency of EBT programs with the results of EBT Accident Incident Analysis, sorting and classification of results into training topics
Jan Nisuda	HF/Engineer	Assistance with guidance in construction of the report, as well as editing
Dr Simon Henderson	Pilot/Instructor/Scientist	Collaboration to create the pilot survey. Distribution of the questionnaire, collection and analysis of results
Dr Barbara Holder	Software Engineer	Assistance with FOA including analysis of flights across aircraft types, regions and operators
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Dr Ashleigh Merritt	Pilot/Instructor/Scientist	
Professor Patrick Murray	Pilot/Analyst	
Hugh Webbon	Scientist	
Dr Douglas Farrow	Engineer	
Anne Guerin	HF Specialist	
Dr Duncan Harris	Engineer	
Harald Hendel	Pilot	
Gavin McKellar	Pilot	
Dr Christian Norden	Pilot	
James Pegrum		
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Soren Foss		
Vinod Gopalakrishnan		
Dieter Harms		
Magnus Heide		
Arto Helonen		
Mark L'Esperance		
Mary Leung		
Mattias		

A
Bac

- 2) ...
- 3) Signi... occur...
- 4) The crew... plus a part... safety conce... programmes w...
- 5) All accident data i... cause. Most large... without technical mal...
- 6) ICAO mandated the analysis of flight data... world fleet basis provides an opportunity to... one based on risk of occurrence and to mee...

This purpose of this document is to outline the necessary steps... plus the outcome of activities such as LOSA, to provide a fleet a... design of crew training and the safety standards for the regulation of b...



Data Report for Evidence-Based Training

July 2013

1st Edition

International Civil Aviation Organization

Dr Simon Henderson	Pilot/Instructor
William Johnson	Pilot/safety specialist
Tom O'Kane	Mathematician
David Owens	Pilot/Instructor
Andrew Pousen	Pilot/Instructor
Ernest Scharp	Pilot/Instructor
Dr Daniel Scully	Pilot/Instructor
Peter Soenenma	Pilot/Instructor
Roy Spencer	
Eric Vanner	



Evidence-Based Training Implementation Guide

July 2013

1st Edition



IFALPA
The Global Voice of Pilots

Yours sincerely,

Nancy J. Graham
Director
Air Navigation Bureau

805 Chippewa Street
Montreal, Quebec
Canada H3C 1A7
Tel: +1 514 953 8219
Fax: +1 514 953 8517
E-mail: ictp@icao.int
www.ictp.int



Doc 9868

PROCEDURES FOR AIR NAVIGATION SERVICES

Training

Third Edition, 2020

This edition incorporates all amendments approved by the Council prior to 8 June 2020 and supersedes on 5 November 2020, all previous editions of Doc 9868.

INTERNATIONAL CIVIL AVIATION ORGANIZATION

Striving for excellence

Addressing vulnerabilities

Relevant to the job

Non-judgemental

Supports self-efficacy

Solution based feedback

Focussed on process

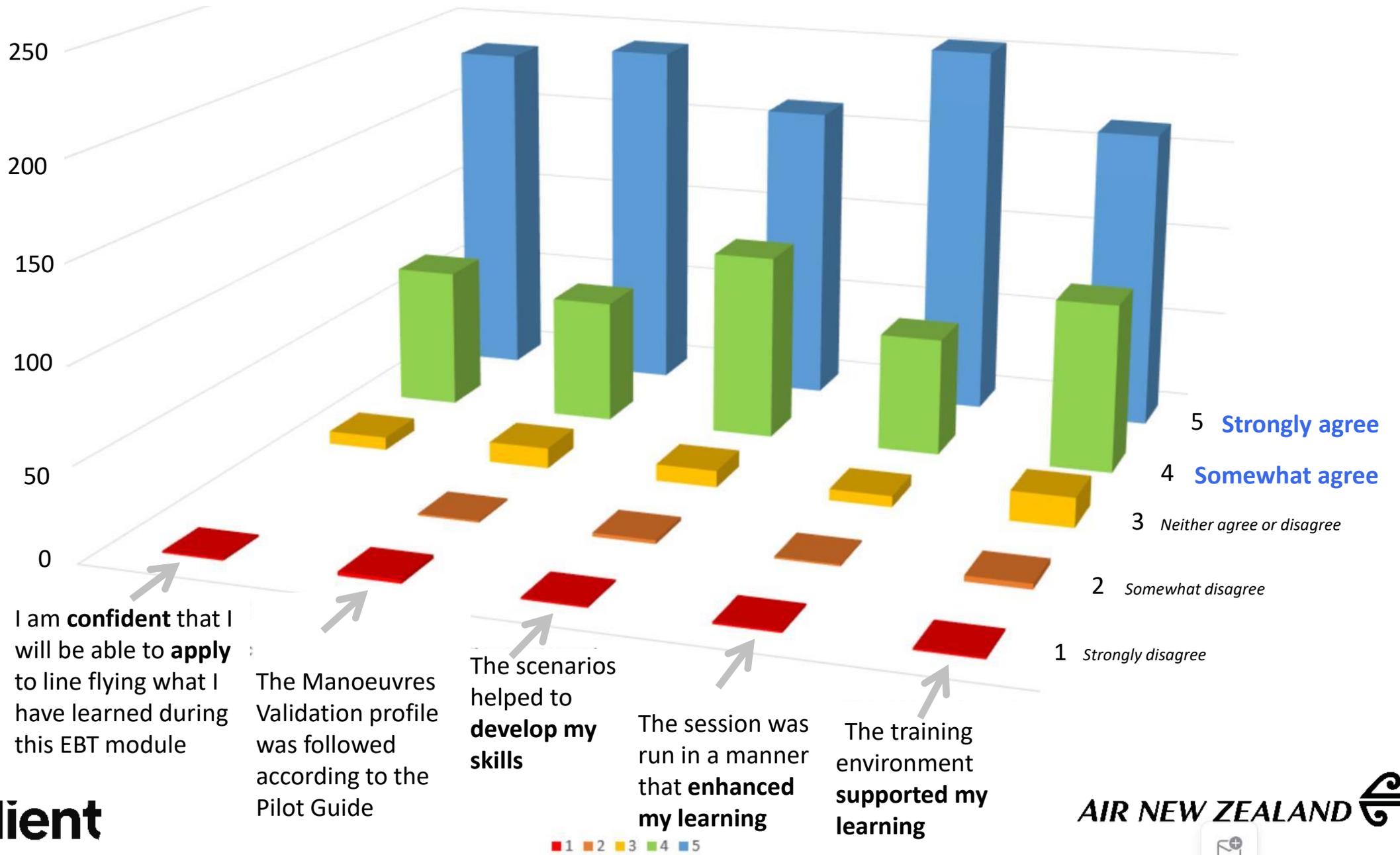
Tailored to individual needs

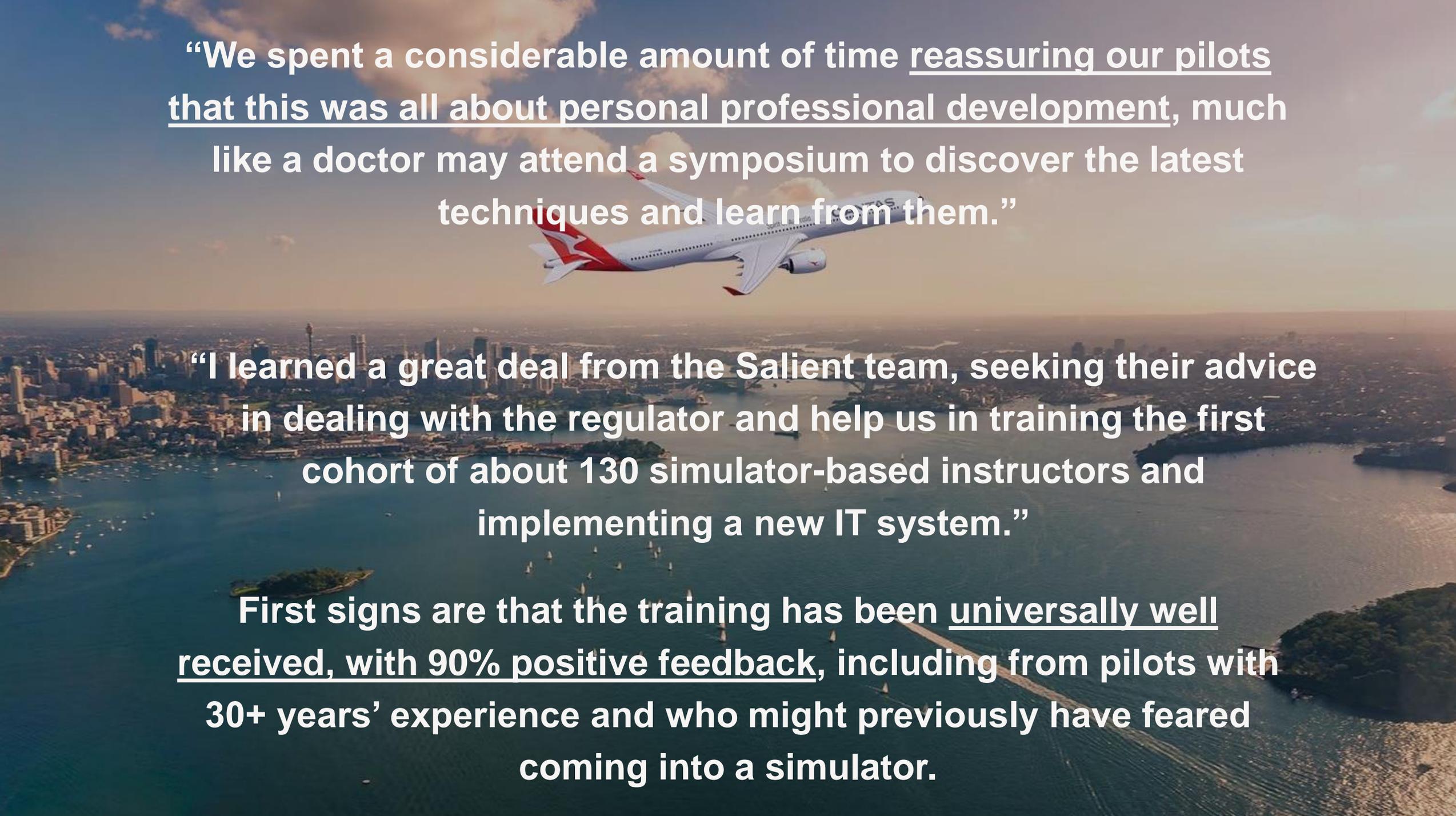
Self-directed learning

Learning by discovery

not T!





An aerial photograph of a city and harbor, likely Sydney, Australia, with a Qantas airplane flying overhead. The city skyline is visible in the background, and the harbor is filled with water and boats. The sky is blue with some clouds.

“We spent a considerable amount of time reassuring our pilots that this was all about personal professional development, much like a doctor may attend a symposium to discover the latest techniques and learn from them.”

“I learned a great deal from the Salient team, seeking their advice in dealing with the regulator and help us in training the first cohort of about 130 simulator-based instructors and implementing a new IT system.”

First signs are that the training has been universally well received, with 90% positive feedback, including from pilots with 30+ years’ experience and who might previously have feared coming into a simulator.



**Relevant to
real life**

**Immersive
experience**

**Focus on
process**

**Learn from
positive**

 Salient



Copa Airlines 